

Applicant: Vitaly Burkatovsky
U.S. Serial No.: 10/667,640
Filing Date: September 22, 2003

Docket No. 111102.156 US1

REMARKS

Applicants thank Examiner Pham for allowing Claims 1-15 and for indicating Claims 17, 19, 22, and 24 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-15 have been amended to improve readability.

Claims 16, 18, 21, and 23 are canceled.

Claims 17, 19, 20, 22, 24, and 25 have been amended to rewrite the claims in independent form.

Claims 26-33 are added to more specifically claim certain embodiments of the present invention.

Support for new Claims 26-33 is found, for example, at found at Figures 11-13, at page 21, line16 to page 24, line 18, and in originally-filed Claims 16-25.

No new matter is believed to have been added by the amendments.

Entry of the above amendments and reconsideration of the application are respectfully requested.

Supplemental Information Disclosure Statement

Applicant is hereby submitting a Supplemental Information Disclosure Statement along with the requisite fees. Applicant respectfully requests Examiner Pham to enter this IDS and return a signed and initialed copy of the submitted Form PTO SB-08.

Applicant further requests Examiner Pham to return a signed and initialed copy of the Form PTO SB-08, filed on December 6, 2005.

Lastly, although Examiner Pham indicated that he has considered the cited references by returning a signed copy of the Form PTO-1449 filed on August 18, 2004, Applicant notes that U.S. Patent No. 5,014,238 (the '238 patent) has not been initialed. Applicant respectfully

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requests Examiner Pham to provide his initials next to the '238 patent and return a copy of the signed and initialed Form PTO-1449.

Rejections Under 35 U.S.C. § 102(e)

Claims 16, 18, 20, 21, 23, and 25 were rejected under 35 U.S.C. § 102(e) as being anticipated by Bhatnagar, U.S. Patent No. 6,739,145 (hereinafter "Bhatnagar").

Specifically, with respect to originally-filed Claims 20 and 25, now rewritten as independent Claims 16 and 21, respectively, the Examiner asserts that:

- (a) "Bhatnagar teaches at least one of said configurable output control logic modules is connected to two of said high-side drivers (see col. 12 lines 27-34, col. 12 lines 59-65, and col. 13 lines 34-41),"
- (b) "said two high-side drivers connected through respective output pins of said controller to one side of a load (see FIG. 6),"
- (c) "wherein said configurable output control logic module is configured to simultaneously control said two high-side drivers (see col. 12 lines 35-39, col. 13 lines 1-3, col. 13 lines 42-45)."'

(pp. 4-5; emphases added). Applicant respectfully traverses the rejection.

Bhatnagar describes a configurable electronic controller comprising a configurable control circuitry and a configurable output interface circuitry for various control functions and various interfaces (see Abstract and FIG. 1). Generally, the configurable control circuitry (C) sends selection and drive signals to the configurable output interface circuitry (O) which can drive loads connected to the various output channels of the configurable output interface circuitry (O).

One implementation of the output interface circuitry is shown in FIG. 8 (*also see* col. 10, lines 28-47). As shown in FIG. 8, Bhatnagar describes only one connection from the configurable switch control circuitry to the respective switches (*see* FIG. 8 and col. 10, lines 28-47). Furthermore, FIG. 8 shows a demultiplexer distributing signals to multiple loads from one

output pin of the configurable control circuitry (C). As shown, each load is connected to only one switch, controlled through the digital demultiplexer, latch, and configurable switch control circuitry. This means that operation of the loads are carried out sequentially and not simultaneously, as required by the instant claims. In fact, Bhatnagar teaches that “[d]uring operation control circuitry (C) sequentially selects a particular channel in output interface circuitry (O) using selection control signal (C1a), while simultaneously providing drive signal (C1b) to actuate the selected output channel.” (Col. 8, lines 52-55; emphasis added).

Further suggestive of this fact are the particular examples provided in Bhatnagar. FIGS. 14-16 show examples of how a washing machine, a refrigerator, and a HVAC can be driven by the configurable controller of Bhatnagar. To illustrate the reasons for sequential driving of such loads in Bhatnagar, one hypothetical scenario may be envisioned. If the switches of Bhatnagar’s output interface circuitry (O) each have a current capacity of 1A and a load requires 1.8A to be properly driven, two 1A switches must be connected to the load in a parallel fashion. That is, two output pins of the output interface circuitry (O) can be shorted and connected to the load. As described earlier, Bhatnagar teaches driving the loads by providing a drive signal that is demultiplexed and routed to the various switches (and loads) via latches. In such a setup, there will inevitably be a (small) delay between the time the control signal reaches the first switch and the second switch. Hence, the first switch to close will be subjected to a current exceeding its maximum permitted value up to the moment the second switch is closed. Such a small delay may cause a short current spike that can damage the first switch or, at the least, dramatically reduce the operating lifetime of the switch.

Therefore, for at least the reasons stated above, Bhatnagar fails to disclose or suggest the claimed invention of instant Claims 20 and 25. Applicant requests the Examiner to reconsider and withdraw this ground of rejection.

Applicant further submits that new Claims 26-33 are also directed to allowable subject matter. Applicant submits that the Bhatnagar fails to disclose or suggest a configurable controller as claimed in Claim 26 or a method for controlling a plurality of loads as claimed in Claim 30. Claims 27-29 and 31-33 which depend on Claims 26 and 30, respectively, are also allowable for at least this reason. Entry and allowance of the claims is respectfully requested.

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Comments on Reasons for Allowance

Applicant hereby notes that the allowed claims are limited only by the claims themselves and are not limited by Examiner's Reasons for Allowance. In particular, Claims 13-15, in steps (g) and (h) require: "(g) converting said plurality of input signals into a plurality of time-based parameters; and (h) converting said plurality of time-based parameters into required digital forms." Claims 13-15 do not require "each one of said plurality of input cells is operable to convert input signal parameters to time-based parameters" or "each of said signal acquisition modules is configured to convert said time-based parameters to a required digital form" (see page 7 of the Office Action dated December 15, 2005).

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Conclusion

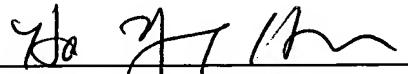
Applicant respectfully submits that the application and claims are now in condition for allowance. If the Examiner believes that further discussion would be helpful, he is respectfully requested to telephone the undersigned agent at (212) 295-6404 to advance the application to allowance.

If there are any fees required, the Commissioner is hereby authorized to charge any such fee(s) that may be necessary in this application to Deposit Account No. 08-0219.

Respectfully submitted,

WILMER CUTLER PICKERING HALE AND DORR LLP

Date: February 10, 2006

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